Application No.: 09/755,355 **Atty Docket: BLFR 1002-1**

REMARKS

Claims 1-42 are pending in this application. The Examiner rejects claims 1-42. Claims 1, 4, 8, 10, 12, 14, 16, 19, 23, 25, 27-29, 33-35 and 39-40 under 35 U.S.C. § 102(a) as anticipated by Technology Strategy, Inc. web site materials and rejects the remaining claims under 35 U.S.C. § 103(a) as unpatentable over the same web site materials, sometimes in combination with an additional reference.

Applicants respectfully traverse the rejections without amendment (except correcting obvious typographical errors in claims 3 and 39) in the remarks that follow.

Rejection Under 35 U.S.C. § 102(a) of Claims 1, 4, 8, 10, 12, 14, 16, 19, 23, 25, 27-29, 33-35 and 39-40

The Examiner rejects **claims 1, 4, 8, 10, 12, 14, 16, 19, 23, 25, 27-29, 33-35 and 39-40** under 35 U.S.C. § 102(a) as anticipated by Technology Strategy, Inc. screenshots from archive.org attributed to www.grossprofit.com (References A), reprint on web site attributed to Stores Magazine, "Merchants Try Complex Math Tools to Improve Inventory Decisions" (Reference B), and reprint on web site attributed to The Boston Globe, "Looking Back to Fashion's Future". The Examiner has provided copies of web site materials "A", "B" and "C" that were all retrieved from web.archive.org's "Wayback Machine" and indicated by web.archive.org as having been archived on March 2, 2000 from grossprofit.com, a web site operated by Technology Strategy, Inc. Reference "A" is 9 pages purportedly archived from grossprofit.com, particularly the TSI Home, About TSI, Solutions, Learn More link on Solutions, and Careers pages. Reference "B" is 3 pages purportedly archived from the site, particularly linked from the Solutions page to the News Desk page to a purported reproduction of an article from Store Magazine. Reference "C" is 4 pages linked along the same path as "B" to a purported reproduction of an article from the Boston Globe.

Effective Date of the Reference(s)

References "A", "B" and "C" appear to be entitled to a March 2, 2000 effective date, but not a 1998 date, on the record assembled thus far. The URL reported in the footer of the printed pages shows that they were retrieved from web.archive.org's "Wayback Machine", not from google.com, Stores Magazine or The Boston Globe. Applicants reached the same pages by following the "Mar 02, 2000" link. http://web.archive.org/web/*sa_/http://www.grossprofit.com/ ("2000" column). Accordingly, none of the material provided by the Examiner is entitled to a 1998 date, on the record.[1]

Applicants are properly careful about attributing an early date to work by TSI / grossprofit.com / ProfitLogic, because a market overview by Alan L. Montgomery, "*The Implemenation Challenge of Pricing Decision Support Systems for Retail Managers*", http://www.andrew.cmu.edu/user/alm3/papers/pricing%20dss.pdf print date 26 March 2004, accessed 16 January 2005, at p. 2, indicates that ProfitLogic's first price optimization software was introduced in 2001, which puts it as much as 11 ½ months after the filing date of this application. Three patent applications by TSI's inventors all were filed after this patent application and do not qualify as prior art, as explained below. And the grossprofit.com web site might be dated by the claim in reference A, page 1, section 1, that a patent application was pending.

Review of Law Applicable to the "Known or Used" Clause

The Examiner is offering the web site references as evidence of what "was known or used by others in this country" – it would otherwise be improper to combine three references in an anticipation rejection. Because this clause of 102(a) is asserted infrequently by Examiners, we begin with a review of the applicable law.

The MPEP § 2132.01 emphasizes the public knowledge requirement implicit in the "known or used" clause. Unless the claimed features are a matter of public knowledge, the existence of a system inaccessible to the public that might have used similar technology "cannot result in rejection under 35 U.S.C. 102(a)":

[1] The Wayback dating methodology is an issue that Applicants expressly reserve for another day and do not concede without further research. For "B" and "C" to be entitled to a 1998 date, as a matter of evidentiary principle, the Examiner would need to provide material from a copy of Stores Magazine or The Boston Globe, rather than from an archive of the grossprofit.com web site.

I. "KNOWN OR USED"

"Known or Used" Means Publicly Known or Used

"The statutory language 'known or used by others in this country' (35 U.S.C. § 102(a)), means knowledge or use which is accessible to the public." *Carella v. Starlight Archery*, 804 F.2d 135, 231 USPQ 644 (Fed. Cir. 1986). The knowledge or use is accessible to the public if there has been no deliberate attempt to keep it secret. *W. L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983). ...

Another's Sale of a Product Made by a Secret Process Can Be a 35 U.S.C. 102(a) Public Use if the Process Can Be Determined by Examining the Product

"The nonsecret use of a claimed process in the usual course of producing articles for commercial purposes is a public use." But a secret use of the process coupled with the sale of the product does not result in a public use of the process unless the public could learn the claimed process by examining the product. Therefore, secret use of a process by another, even if the product is commercially sold, **cannot result in a rejection under 35 U.S.C. 102(a)** if an examination of the product would not reveal the process. *Id.*

Professor Chisum, 1-3 Chisum on Patents § 3.05 (2004), provides a similar analysis of the "known or used" clause, as requiring good evidence of a complete and operable product reduced to practice and including all of the claimed features:

Knowledge, use, or invention of the product or process in question in this country prior to the applicant's date of invention bars issuance of a valid patent.

Prior use must be of the **complete product or process actually reduced to practice.** The use must be accessible to the public in some minimum sense. However, the prior user need not take any affirmative steps to publicize the product or process.

Prior knowledge must consist of a **complete and adequate description of the product or process that is available to the public.** ...

[b] ... A prior use under Section 102(a) must be of a **complete and operable product or process that is reduced to practice.** [21]

Footnote 21. *E.g. Haworth Inc. v. Herman Miller Inc.*, 37 USPQ2d 1080, 1093 (W.D. Mich. 1994) (a prior use must "have been of an invention reduced to practice."); *General American Transportation Corp. v. Cryo-Trans, Inc.*, 893 F. Supp. 774, 792 (N.D. Ill. 1995), *aff'd in part, rev'd in part*, 93 F.3d 766, 39 USPQ2d 1801 (Fed. Cir. 1996) (citing Treatise; "When a party asserts that prior use or knowledge of an item by others is prior art, it must be shown that the use was of a complete and operable product that was reduced to practice."); *Baron v. Bausch & Lomb Inc.*, 25 USPQ2d 1641,

1662 (W.D. N.Y. 1992) ("The phrase 'used' means publicly accessible use. The use must be of an invention reduced to practice. The invention does not have to be commercially perfected, but it must be beyond the experimental stage."); *AIR-vend, Inc. v. Thorne Industries, Inc.*, 625 F. Supp. 1123, 229 USPQ 505 (D. Minn. 1985), aff'd, 831 F.2d 306 (Fed. Cir. 1987) (unpublished); *Medtronic, Inc. v. Daig Corp.*, 227 USPQ 509, 515 (D. Minn. 1985), *aff'd*, 789 F.2d 903, 229 USPQ 664 (Fed. Cir. 1986) ("When a party asserts that a prior use anticipates a patent claim under § 102(a) or (b), that party must also establish that such a use was of a complete invention, i.e., conceived and reduced to practice."); *Rosemount, Inc. v. Beckman Instruments, Inc.*, 218 USPQ 881 (C.D. Calif. 1983), *aff'd*, 727 F.2d 1540, 221 USPQ 1 (Fed. Cir. 1984).

The well-known case of *Lockwood v. American Airlines*, 107 F.3d 1565, 1570 (Fed. Cir. 1977) is consistent with requiring public knowledge and awareness of a complete and operable product, coupled with evidence of how the product operated internally. The court in *Lockwood* made it clear that the SABRE reservation system, proffered as a public use, had over one thousand connected sales desks and that the public was aware that the system included the claimed features. There was no dispute in the record that the SABRE system operated publicly at one thousand sales desks, in a manner that encompassed all elements of the claim, combined in the manner claimed.

The Every Element and How the Elements are Combined Rule Also Applies

As set out in MPEP 2131, at 2100-73,

TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM

"A claim is anticipated only if **each and every element** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). >"When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art." *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001) (claim to a system for setting a computer clock to an offset time to address the Year 2000 (Y2K) problem, applicable to records with year date data in "at least one of two-digit, three-digit, or four-digit" representations, was held anticipated by a system that offsets year dates in only two-digit formats). *See also* MPEP § 2131.02.< "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). **The elements must be arranged as required by the claim**, but this is not an *ipsissimis verbis* test, i.e., identity of

terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

It is instructive that the level of detail at which anticipation of every element of the claim was tested in *Brown v. 3M*, as described in the MPEP, is whether the year portion of the date was expressed in two, three or four digits. An aggregation of features claimed is not enough; the reference must show all the claimed features **and how they are combined.** *Id.; see* MPEP § 2121.04. With these principles in mind, we address the references.

Grossprofit.com Does Not Show Every Element Arranged as Claimed

The grossprofit.com web site references are a tease, intended to leave one guessing about just how TSI was applying black box mathematical models to improve the gross profit of clients. To obtain any useful information, a potential client needed to complete a contact form, included as pp. 6-7 of "A." There is no evidence of how TSI followed up on a prospective client inquiry.

The buzz words used on the grossprofit.com web pages sound good, but teach nothing. They are not arranged or combined logically to provide anything more than an incentive to seek more information; **they are not arranged as required by the claims**; they do not show features combined as claimed.

Advertising hype, known as vapourware, can be contrasted with an enabling disclosure by comparing the grossprofit.com web site material with published patent applications by the TSI inventors (TSI is now known as ProfitLogic). Three published applications name inventor Jonathan Woo, who is identified both on the grossprofit.com web site and in reference "C", p. 3, after section 5. Among these published applications, publication US 2002/0147630 A1 (Oct. 10, 2002) addresses "Assortment Decisions", publication US 2003/0074251 A1 (Apr. 17, 2003) addresses "Clustering" for retail product seasonal demand data that incorporates standard deviation error measure in calculation, and publication US 2003/0229502 A1 (Dec. 11, 2003) addresses "Markdown Management." These publications include details of how optimization of a pricing schedule or selection of size assortments for a particular style might be carried out. This detail, which does not qualify as prior art because our application has an earlier filing date, shows that Woo had a different approach than Applicants claim. Presumably, Woo did not apply as sophisticated an approach to Gymboree's inventory

issues mentioned in the hype, because Woo would be committing fraud on the Patent Office if he waited more than a year to file these patent applications. An issued patent, U.S. Pat. No. 6,834,266, also naming Woo as an inventor and filed *after* the application being examined, was examined by Beth Van Doren and Tariq R. Hapiz.

It takes the detail provided in the Woo applications and issued patent to have any idea what Woo's or TSI's approach was or eventually evolved into. The hype on grossprofit.com did not place the claimed invention in the possession of the public. *See*, 1 Chisum on Patents § 3.04 [1][b][v] to [1][c].

Claim 1

Claim 1 includes the limitations:

associating sales history data for sales of a cloned good at a plurality of selling locations with an other good;

scaling the associated sales history data upward or downward based on anticipated sales of the other good;

tracking actual sales of the other good for an interval; and

rescaling the associated sales history data based on actual sales of the other good during the interval.

These limitations are not found in Technology Strategy, Inc. Most of the passages cited by the Examiner are reproduced below, with exceptions noted. Applicants do not find the above limitations, arranged as claimed, in any of the cited passages. The notion of **cloning a sales history** is entirely missing from the web site materials.

> **"Merchants tend to view the world as a hierarchical series of questions," Friend says, instead of approaching the process of merchandising and inventory planning as a single formula. Merchants must figure out what and how much to buy, how to allocate funds across product lines, how much inventory to send to each store, how much to mark up products, and when and how much to mark down items.**

3

B, page 1, section 3. The passage above states a problem, not a solution. It does not teach or even mention associating or cloning the sales history of a good to an other good that lacks a sales history; it does not describe an actual reduction to practice.

risk in the plan, where the retailer could increase or decrease its inventory. 1

With the MPE model, "We analyze their historic data and create our own statistically derived forecast of future demand," Friend explains. "Then, through some computer front ends, we compare their merchandise plan to our mathematically derived forecast, and we highlight the risks or the errors."

The forecast gives a range within which sales might fall, he says. "If their plan is outside that range, they may want to rethink the plan or at least go back to the buyer to understand if there is a reason why the plan is different than history would suggest it should be." 2

B, page 2, sections 1-2. These sections present the classic teaser, without sufficient details to teach anything, much less cloning a sales history.

Product Life Cycle
In addition to the MPE and GM models, TSI also has Product Life Cycle and Volume-Price Endgame models. The PLC model is used for forecasting fashion or new products that have no sales history. Endgame is built on the PLC model and helps retailers determine inventory reduction strategies. 2

"Fashion items by definition are things that don't have a lot of history to help inform the forecast," Friend says. Through trials over time, though, TSI has "stumbled into some techniques for representing mathematically fashion-product life cycle curves. 3

"Very early in the season, within the first couple of weeks, we are able to detect whether an item is actually performing consistent with the mathematical forecast of its demand." 4

If the item is consistent with the forecast early on, it will continue to follow the same pattern. If it is not doing well early, "it never makes it, and that has implications for marking down, getting rid of it and trying something else," he says. "Also, there can be an early-warning signal if it's going to be a big hit so you can buy more before it is too late."

To optimize the full life cycle of a product, Endgame concentrates on a successful end to a product season. "Endgame is an optimization model that helps you optimize the timing and the amount of markdowns as demand fades," Friend says. The timing and amount of markdowns in the down-swing of a product can dramatically affect profits. 5

B, page 3, sections 2-5. Section 2 mentions the problem of "new products that have no sales history", but no usable solution to the problem is taught. TSI's best mode is not disclosed or enabled by the teaser, "Through trials over time, though, TSI has 'stumbled

into some techniques for representing mathematically fashion-product life cycles." This would never pass scrutiny in a patent application, so it cannot anticipate a claim either.

Technology Strategy's top-line product is custom analysis of historic sales patterns, in fine detail, to develop forecasts of what sizes and colors will be needed in individual stores, and at what time of the year. 4*

Known as multivariant calculations, these can take dozens of seemingly independent factors into account - the equivalent of playing giant tic-tac-toe games in three dimensions, with a vast number of winning combinations available. Until the development of inexpensive, high-speed computing capability, Levy said, they were beyond the reach of all but the largest corporations. 5*

"He said, 'Once upon a time this was all simple. I could go out in the back room and look and see how many feet of empty hangers were left on the racks and know from that everything I needed to know,'" Levy recalled. Gymboree's management nevertheless signed a contract, and when Levy and Bible delivered their initial review of next spring's merchandising plan, took the results seriously. 6

"When you consider how much money you have tied up in your inventory, it is better that you have a better understanding of your plan and more controls around it," said Neal, Gymboree's business development executive. "I certainly understand their methodology, and I have some faith and confidence in it."

C, page 3, sections 4-6. This last passage that the Examiner cites for cloning sales history data refers to multivariant statistical analysis, which does not teach the claimed cloning.

As the first element of claim 1 is not met by any of the passages cited by the Examiner, claim 1 should be allowable over Technology Strategy, Inc.

Neither is the second element of claim 1 met. In addition to the sections reproduced above, the Examiner cites reference A, pages 1-2 and 4, which are too long and vaguely referenced to justify reproducing them in their entirety. Nonetheless, we reproduce a potentially relevant passage from page 4, which gives more detail than elsewhere:

Our approach follows a scientific process of Data Mining, Mathematical Modeling, Genetic Optimization, and Monte Carlo Simulation to develop sophisticated analytical engines for forecasting sales and inventory requirements, optimizing markdown productivity, optimizing color/size assortments by store, or establishing true store/class level plans. Once calibrated, the model TSI creates is automated into a customized software tool that can be run on an ongoing basis for use by a retailer's finance and merchandise planning staff. 2*

TSI uses a retailer's own historical sales and inventory data to determine the underlying behavior of each merchandise type. These patterns are translated into mathematical equations, coded into software, and run through simulation and optimization models to identify the combination of variables (inventory, sales, markdowns, etc.) that results in maximum gross profit. 3*

The model can be run in advance of the season to estimate how much inventory to buy/make and to set financial targets. Then, during the season, the model is used to analyze actual weekly sales and inventory data to determine for each category of merchandise markdown and allocation decisions that will result in maximum gross margin dollars. 4*

A, page 4, sections 2-4. The words "Data Mining, Mathematical Modeling, Genetic Optimzation, and Monte Carlo Simulation" in section 1 are too vague to suggest the scaling cloned sales data to match anticipated sales. Once again, this passage is a teaser, not a teaching or disclosure of a method.

To address the third and fourth elements, the Examiner again cites reference A, pages 1-2 and 4 (reproduced in part), and reference B, page 2, sections 2-6 (reproduced below), and page 3, sections 2-6 (substantially reproduced above), "wherein actual sales are tracked for an interval." We remind the Examiner that the third and fourth element address rescaling of cloned sales histories, which is discussed in the context of reorderable basic goods, rather than non-reorderable fashion goods. The reference A pages make no mention of rescaling of cloned sales histories. The reference B, page 3 sections reproduced above refer to comparing a forecast to actual sales, but do not refer to cloned sales histories or to rescaling cloned sales histories. Instead, they refer to markdown strategies.

The forecast gives a range within which sales might fall, he says. "If their plan is outside that range, they may want to rethink the plan or at least go back to the buyer to understand if there is a reason why the plan is different than history would suggest it should be." 2

One aspect of Gymboree's merchandising plans that poses a challenge is that the company designs and manufactures its own products, which are sold only through Gymboree outlets, says Susan Neal, the retailer's vice president-business development. Maintaining the right inventory levels and determining the timing and percentages of markdowns for successful sell-through have been particularly difficult.

"We started the year with our inventory much higher than it should have been," Neal explains. "As a result, we have had steep promotions, which have hurt our margins and earnings. And any time analysts hear you have too much inventory, they are concerned." 3

Gymboree will continue to use TSI to evaluate its spring and fall line plans in the future to help balance the more subjective plans of the merchandisers, Neal says. "TSI provides a third-party, objective view, and they can challenge what the merchandisers come up with," she says. The merchandisers always have an opportunity to explain their strategies if challenged, however. 4

Gymboree also plans to use TSI's Gross Margin model to test pricing and markdown strategies.

"We know when we bring in a line, at some point we'll have a first markdown, and then a second markdown," Neal says. "We know we will mark down eventually, but there are three things we ask: When do we mark down? How deep is the markdown – 30 percent, 40 percent or 50 percent? And how long do we stay at one markdown before going to the next markdown?" 5

The GM model takes historical sales data to analyze different pricing strategies, giving the probability of reaching the targeted gross margin.

"It's using a method called Monte Carlo simulation, which is, in essence, a way to get the computer to run thousands of variations of different strategies very quickly so you can see the likely outcome," Friend explains. "It helps you assess the margin impact of different markdown strategies before putting them into effect." 6

B, page 2, sections 2-6. This passage addresses markdown strategies in the context of seasonal goods, such as "spring and fall line plans", not the claimed elements.

Neither the first element nor the second element nor elements three and four are met by the passages cited by the Examiner. Therefore, claim 1 should be allowable over Technology Strategy, Inc.

Claim 4

Claim 4 includes the limitation:

wherein associating sales history data includes copying the sales history data

This limitation is not found in Technology Strategy, Inc. The Examiner relies on "reference A, pages 1-2 and 4, reference B, page 2, sections 2-6, and page 3, sections 2-6, wherein the plan copies sales history data." All of these passages are discussed above. Re-reviewing them, there is no hint of copying sales data from a cloned good to an other good. TSI's approach of multivariant statistical analysis sounds much different than copying sales history data, to the extent that one can tell anything about what TSI actually does.

Therefore, claim 4 should be allowable over Technology Strategy, Inc.

Claim 8

Claim 8 includes the limitation:

wherein scaling the associated sales history data includes modifying the associated sales history data

This limitation is not found in Technology Strategy, Inc.

The Examiner cites the same passages as relied on for claim 4. Reviewing those passages, we do not find copy, scaling or modifying sales history data. TSI's approach of multivariant statistical analysis sounds much different.

Therefore, claim 8 should be allowable over Technology Strategy, Inc.

Claims 10 and 14

Claims 10 and 14 include the limitations:

wherein (re)scaling the associated sales history data includes storing a scaling factor to be applied to the associated sales history data.

These limitations are not found in Technology Strategy, Inc. The Examiner relies on some new passages: "reference A, page 2, sections 1-2, page 4, sections 2-4, and reference B, page 1, section 5, page 2, sections 6-7, and page 3, wherein the scaling factor is a stored model."

TSI is a team of PhD's and mathematical modeling experts from Harvard and MIT that helps retailers maximize gross profit and reduce inventory investment risk. We develop and implement custom mathematical models to solve high-leverage merchandising and inventory productivity issues. Our expertise includes: 1

- Optimizing the financial impact of markdowns and promotions.
- Determining the optimal allocation of inventory investments across distribution channels (i.e., stores, Internet, and catalog) to maximize profitability.
- Mitigating the risk/return tradeoff of initial inventory investments.
- Optimizing store-level allocations to enhance the probability of maximum gross profit. 2

Reference A, page 2, sections 1-2. This is a functional description without any linked structure or any disclosure of the underlying method. It does not match the claimed elements.

Our approach follows a scientific process of Data Mining, Mathematical Modeling, Genetic Optimization, and Monte Carlo Simulation to develop sophisticated analytical engines for forecasting sales and inventory requirements, optimizing markdown productivity, optimizing color/size assortments by store, or establishing true store/class level plans. Once calibrated, the model TSI creates is automated into a customized software tool that can be run on an ongoing basis for use by a retailer's finance and merchandise planning staff. 2*

TSI uses a retailer's own historical sales and inventory data to determine the underlying behavior of each merchandise type. These patterns are translated into mathematical equations, coded into software, and run through simulation and optimization models to identify the combination of variables (inventory, sales, markdowns, etc.) that results in maximum gross profit. 3*

The model can be run in advance of the season to estimate how much inventory to buy/make and to set financial targets. Then, during the season, the model is used to analyze actual weekly sales and inventory data to determine for each category of merchandise markdown and allocation decisions that will result in maximum gross margin dollars. 4*

Reference A, page 4, sections 2-4. This marketing hype does not mention storing a (re)scaling factor to apply to sales history data. The approach of translating underlying behaviour of merchandise types sounds much different than copying sales history data, to the extent that one can tell anything about what TSI actually does.

Historical Sales Data
When the children's apparel manufacturer/retailer hired TSI this past summer, Gymboree asked the company to evaluate its plans for spring 1999, based on its historical sales data. After doing a statistical analysis, TSI pointed out areas of 5

Reference B, page 1, section 5. All this says is that Gymboree hired TSI. It teaches nothing.

The GM model takes historical sales data to analyze different pricing strategies, giving the probability of reaching the targeted gross margin.

"It's using a method called Monte Carlo simulation, which is, in essence, a way to get the computer to run thousands of variations of different strategies very quickly so you can see the likely outcome," Friend explains. "It helps you assess the margin impact of different markdown strategies before putting them into effect." 6

"It will help us manage our markdowns," Neal says. "If a product is not selling well, then the demand curve will show when the markdowns should be." 7

While Gymboree initially supplied TSI with its sales history for the MPE model,

Reference B, page 2, sections 6-7. This addresses only markdowns, not the claimed elements.

The Examiner finally relies on reference B, page 3. Section 1 is marketing-speak, irrelevant to anticipation. Sections 2-6 are marketing quotes regarding TSI's Endgame markdown software. Again, TSI's best mode is not disclosed or enabled by the teaser, "Through trials over time, though, TSI has 'stumbled into some techniques for representing mathematically fashion-product life cycles." This would never pass scrutiny in a patent application, so it cannot anticipate a claim either.

Therefore, claims 10 and 14 should be allowable over Technology Strategy, Inc.

Claim 12

Claim 12 includes the limitations:

wherein rescaling the associated sales history data includes modifying the associated sales history data.

These limitations are not found in Technology Strategy, Inc. The passages that the Examiner relies upon are discussed above in the context of claim 1, rescaling element. The reference A pages make no mention of rescaling of cloned sales histories. The reference B, page 3, sections reproduced above refer to comparing a forecast to actual sales, but does not refer to cloned sales histories or to rescaling cloned sales histories. Instead, it refers to markdown strategies. The whole discussion in reference B, page 2, sections 2-6 addresses markdown strategies in the context of seasonal goods, such as "spring and fall line plans." None of these passages teach rescaling sales history data by modifying the data.

Therefore, claim 12 should be allowable over Technology Strategy, Inc.

Claim 16

Claim 16 is the second independent claim. It includes the limitations:

associating sales history data for sales of a plurality of goods at a cloned selling location with an other selling location;

scaling the associated sales history data upward or downward based on anticipated sales at the other selling location;

tracking actual sales of the goods at the other selling location for an interval; and

rescaling the associated sales history data based on actual sales of the goods at the other selling location during the interval

As compared to claim 1, the focus of claim 16 is cloning data from one selling location to an other selling location, for instance, when opening a new store or expanding an old one. The claimed limitations are not found in Technology Strategy, Inc.

The Examiner relies on the all the same passages from references A, B and C, applied to the same claim elements, without adapting to the difference between cloning sales histories from one good to an other good, versus cloning the same good from one sales location to an other sales location.

Applicants do not find the above limitations, arranged as claimed, in any of the cited passages. The notion of a **cloning a sales history** is entirely missing from the web site materials.

Addressing the associating element, the reference B, page 1, section 3 passage states a problem, not a solution. It does not teach or even mention associating or

cloning the sales history of a good from one sales location to an other sales location that lacks a sales history; it does not describe not an actual reduction to practice. The reference B, page 2, sections 1-2, are a classic teaser, without sufficient details to teach anything, much less cloning a sales history. In reference B, page 3, sections 2-5, there is mention of the problem of "new products that have no sales history", but no usable solution to the problem is taught. TSI's best mode is not disclosed or enabled by the marketing-speak, "Through trials over time, though, TSI has 'stumbled into some techniques for representing mathematically fashion-product life cycles." This would never pass scrutiny in a patent application, so it cannot anticipate a claim either. The final passage, reference C, page 3, sections 4-6, which the Examiner cites, refers to multivariant statistical analysis, which sounds much different than the claimed cloning.

As the first element of claim 16 is not met by any of the passages cited by the Examiner, claim 1 should be allowable over Technology Strategy, Inc.

Neither is the second element of claim 16 met. In reference A, page 4, sections 2-4, the words "Data Mining, Mathematical Modeling, Genetic Optimzation, and Monte Carlo Simulation" are too vague to suggest the scaling cloned sales data to match anticipated sales. Once again, this passage is marketing-speak, not a teaching or disclosure of a method.

To address the third and fourth elements, the Examiner again cites reference A, pages 1-2 and 4 (reproduced in part), and reference B, page 2, sections 2-6 (reproduced below), and page 3, sections 2-6 (substantially reproduced above), "wherein actual sales are tracked for an interval." We remind the Examiner that the third and fourth element address rescaling of cloned sales histories, which is discussed in the context of reorderable basic goods, rather than non-reorderable fashion goods. The reference A pages make no mention of rescaling of cloned sales histories. The whole discussion in reference B, page 2, sections 2-6, addresses markdown strategies in the context of seasonal goods, such as "spring and fall line plans." The reference B, page 3, sections reproduced above refers to comparing a forecast to actual sales, but does not refer to cloned sales histories or to rescaling cloned sales histories. Instead, it refers to markdown strategies. None of the cited sections teach rescaling of cloned sales histories.

Neither the first element nor the second element nor elements three and four are met by the passages cited by the Examiner. Therefore, claim 16 should be allowable over Technology Strategy, Inc.

Claims 28 and 29

Claims 28 and 29 include alternative rescaling limitations:

wherein rescaling is based on actual sales of the other selling location as a whole.

wherein rescaling is based on actual sales of the respective goods at the other selling location.

These limitations are not found in Technology Strategy, Inc. The Examiner cites "reference A, pages 1-2 and 4, reference B, page 1, section 3, page 2, sections 2-6, and page 3, and reference C, page 2, sections 3 and 4, and page 3, sections 4-5, which discuss rescaling based on action sales at locations." Other than reference C, page 2, sections 3 and 4, all of these passages are discussed above. Re-reviewing them, there is no hint of rescaling sales data from a cloned sales location to an other sales location. Nor is the claimed detail of how to calibrate rescaling taught. TSI's approach of multivariant statistical analysis sounds much different than copying sales history data, to the extent that one can tell anything about what TSI actually does.

Extended into fashion apparel, where consumer fickleness is always a danger, putting merchandising plans to a mathematical test is regarded with some uncertainty, but many retailers and manufacturers do employ some sort of risk assessment, formal or intuitive, in their planning. "Certain sizes, colors, regional differences, seasonal stuff - those kinds of things are fairly easy to predict," said Heidi Scheller, a Wisconsin-based apparel industry consultant. "But when it comes to fashion-forward merchandise, I think it is difficult." 3

What Technology Strategy offers is a high-powered computer analysis of past selling history within a chain of stores. By analyzing millions of bits of information about the goods sold, prices, and even day and time of sale, Levy and his team say they can build a template of customer behavior. Managers can then apply this model to their plans for the future to learn whether their schemes fit actual experience. 4

Reference C, page 2, sections 3 and 4. This makes it sound like TSI's software does hard work, but one has no idea how it works. This passage does not teach the rescaling methods.

Therefore, claims 28 and 29 should be allowable over Technology Strategy, Inc.

Claim 33

Claim 33 includes the limitations:

wherein rescaling the associated sales history data includes storing one or more scaling factors applicable to the associated sales history data

These limitations are not found in Technology Strategy, Inc.

The Examiner cites "reference A, page 2, sections 1-2, page 4, sections 2-4, and reference B, page 1, section 5, page 2, sections 6-7, and page 3, wherein the scaling factor is a stored model." All of these passages are discussed above. Re-reviewing them, there is no hint of rescaling sales data from a cloned sales location to an other sales location. Nor is the claimed detail of how to calibrate rescaling taught. TSI's approach of multivariant statistical analysis sounds much different than copying sales history data, to the extent that one can tell anything about what TSI actually does.

Therefore, claim 33 should be allowable over Technology Strategy, Inc.

Claims 19, 23, 25, 27 and 34-35

Claims 19, 23, 25, 27 and 34-35 are rejected on the same basis as claims 4, 8, 10, 12 and 28-29, respectively. The Examiner's rejections of those claims are traversed above and restated by reference.

Therefore, claims 19, 23, 25, 27 and 34-35 should be allowable over Technology Strategy, Inc.

Claim 39

Claim 39 is the third independent claim. It includes the limitations:

associating sales history data for sales of a cloned good at a plurality of selling locations with an other good;

scaling the associated sales history data upward or downward based on anticipated sales of the other good;

tracking actual sales of the other good for an interval; and

comparing the actual sales of the other good to the sales history data for a set of candidate goods and evaluating whether the sales history of one or more of the candidate goods better matches said actual sales than the associated sales history data of the cloned good

As compared to claim 1, the focus of claim 39 is cloning data for a good averaged over a plurality of selling locations to an other good, then later evaluating whether a different candidate good's sales history data should be substituted, based on actual sales of the good. The claimed limitations are not found in Technology Strategy, Inc.

The Examiner relies on the all the same passages from references A, B and C, applied to the same claim elements, without adapting to the difference between cloning sales histories from one good to an other good, versus cloning an averaged sales history and reevaluating whether the sales history of a different candidate good should be substituted, based on actual sales of the good.

Applicants do not find the above limitations, arranged as claimed, in any of the cited passages. The notion of a **cloning a sales history** is entirely missing from the web site materials. The notion of later evaluating whether a different candidate good's sales history data should be substituted, based on actual sales of the good cannot be found in Technology Strategy, Inc., either.

Applicants' positions regarding claims 1 and 16 are restated here by reference.

Neither the first element nor the second element nor elements three and four are met by the passages cited by the Examiner. Therefore, claim 39 should be allowable over Technology Strategy, Inc.

Claim 40

Claim 40 includes the limitations:

wherein the actual sales interval includes a plurality of causal periods and evaluating takes place on a causal period by causal period basis

The phrase "causal period" is given meaning on pages 2-4 of the application, including "Selection of a rescaling factor can take into account **causal factors** impacting sales, such as promotions, advertising, reduced selling prices, etc. In this case it is not just a straight comparison of sales but it is a comparison that adjusts for which **causal periods** have been employed on the new item and makes sure that the comparison with the old item has a comparable weighting of the same causal periods. ... A **causal calendar** which tracks causal events impacting goods at particular selling locations is useful, if the rescaling factor is to take into account **causal factors**." With this usage of "causal" and "causal period" in mind, the limitations of claim 40 are not found in

Technology Strategy, Inc.

Therefore, claim 40 should be allowable over Technology Strategy, Inc.

Applicants respectfully submit that claims 1, 4, 8, 10, 12, 14, 16, 19, 23, 25, 27-29, 33-35 and 39-40 should be allowable over Technology Strategy, Inc.

Rejection Under 35 U.S.C. § 103(a) of Claims 2-3, 5-7, 9, 11, 13, 15, 17-18, 20-22, 24, 26, 30-32 and 36-38

The Examiner rejects **claims 2-3, 5-7, 9, 11, 13, 15, 17-18, 20-22, 24, 26, 30-32 and 36-38** under 35 U.S.C. § 103(a) as unpatentable over Technology Strategy, Inc. screenshots from archive.org attributed to www.grossprofit.com (References A), reprint on web site attributed to Stores Magazine, "Merchants Try Complex Math Tools to Improve Inventory Decisions" (Reference B), and reprint on web site attributed to The Boston Globe, "Looking Back to Fashion's Future" in view of Lee et al. (U.S. 5,712,985).

Claims 2 and 3

Claims 2 and 3 include the limitations:

wherein the rescaling takes place after the interval without intervention of a user.

wherein the rescaling takes place repeatedly on a predetermined cycle beginning at the end of the interval, without intervention of a user

These limitations are not found in Technology Strategy, Inc. in view of Lee et al. The Examiner relies on passages from Technology Strategy, Inc. that have been discussed above, including "reference A, pages 1-2 and 4, reference B, sections 2-6, wherein the plan is rescaled based on predetermined intervals." Applicants have rereviewed these passages and found no reference to rescaling or to rescaling without intervention of a user.

The Examiner identifies Lee et al. as disclosing "rescaling occurring without intervention of a user (See at least column 3, lines 54-65, column 7, lines 20-35, column 10, lines 45-67)." We have reviewed Lee et al. and found that it is very highly generalized and teaches away from the claimed rescaling and periodic rescaling after

an initial interval. One of Lee's faults is trying to be everything for everyone. At columns 13-14, Lee et al. suggests using production-oriented forecasting for retail store durables, retail store consumables (fast food), services (haircuts), bank deposits and manufacturing generally. The illustrative examples in columns 7-9 are Macadamia nut cookies and men's haircuts. Over-generalization leads to over-complication, so each inventory item has a base profile (cols. 7-8) and multiple influence profiles (cols. 8-9), such as a standard influence profile, a percentage influence profile and a seasonality profile (col. 9), which combine into a forecast profile (col. 10, lines 5-7). This much complexity leads Lee to teach away from the claimed rescaling.

Lee et al. update profiles (col. 15-20) only after determining proportional updates to the base profile and each of the influence profiles. One of skill in mathematical modeling will recognize that this update complexity requires substantial data and computation. Lee et al. specifically recommend waiting until after the profile has expired to update it for application to future planning. At col. 21, lines 6-13,

> This update process 209 is preferably applied at the end of all time intervals specified in the base profile. Thus, for base profiles that track demand over a single day, the base profile and its influence profiles are updated after each day to which the base profile applies. If the base profile extends over a shorter or longer period, it is updated accordingly. For seasonality influence profiles that extend over many days, the profile is updated after all dates to which the influence profile applies have passed.

As applied to seasonal profiles for sale of basic and fashion goods, referenced in the application being examined, Lee et al. teaches waiting until the end of Spring fashion, for instance, to update item profiles. This does not make sense for clothing, but, then, Lee et al.'s application examples are cookies and haircuts. Lee's method is not as claimed.

There is no permissible combination of TSI and Lee et al. that can be applied against the claims. The proposed combination would impermissibly destroy the TSI reference and change its principle of operation (if one can discern TSI's principle of operation from the web site materials.) "A proposed modification should not 'destroy a reference' by rendering the prior art invention being modified unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1 127 (Fed. Cir. 1984)." Barry R.A. Weinhardt, M. Reinhart, *Obviousness Under 35 U.S.C. 103 Basic Student's Manual*, p. 24 (U.S. P.T.O. Office of Patent Policy Dissemination, Rev. 4

1998); explaining, M.P.E.P. 2143.01 and 2145, paragraph (j)(4). An intended purpose of TSI's software is to develop an endgame markdown strategy. Updating base and influence profiles, as proposed by Lee et al., after completion of the selling season would defeat the purpose of developing an endgame markdown strategy.

In addition, the modification would be improper because it would change the principle of operation described by TSI. M.P.E.P. 2143.01; see Barry et al., *Obviousness Under 35 U.S.C. 103, supra*, pp. 25-26. "As a proposed modification or combination of the prior art should not destroy a reference, the proposed modification or combination should not change the principle of operation of the reference. *In re Ratti*, 270 F. 2d 8 10, 8 13, 123 USPQ 349, 352 (CCPA 1959). This is true even if the combination proposed is operative." Barry et al., *Obviousness Under 35 U.S.C. 103, supra*, pp. 25-26; explaining, M.P.E.P. 2143.01. The principle of operation in TSI, to the extent that in can be understood, is to use a black box multivariant statistical analysis to develop some sort of predictive curves and later to determine markdowns. There is no evidence of TSI using base and influence profiles. Introducing base and influence profiles from Lee et al. would impermissibly change the principle of operation of TSI's system.

The Examiner's statement that TSI and Lee et al. "disclose demand forecasting and supply planning for a business item using a profile of historic data" overstates any similarity between the two. TSI's approach is not sufficiently detailed to practice; it is only detailed enough to be clear that it is much different from Lee et al.'s base and influence profiles, with updating at the end of the profiled period. There is little or no commonality between the references, except that they are computer implemented. There is no evidence of a teaching suggestion to combine, as required by MPEP § 2143.01 and *re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references).

Therefore, claims 2 and 3 should be allowable over Technology Strategy, Inc. in view of Lee et al.

Claims 6 and 7

Claims 6 and 7 include the limitations:

wherein associating sales history data includes creating a reference to the sales history data.

wherein associating sales history data includes creating a pointer to the sales history data.

These limitations admittedly are not found in Technology Strategy, Inc. The Examiner argues that they are found in of Lee et al. "column 5, lines 10-25 and 45-65, column 7, and column 10." These passage explain how a base profile stores sales forecast data, as a vector of expected sales quantities. See, col. 7, line 51 ("[23, 25, 12, 24, 12, 23, ... 10, 3, 1]"). This is neither a "reference" to the sales history data nor a "pointer"; the profile directly stores the values themselves.

As described above, the proposed combination would destroy the TSI reference and change its principle of operation. In addition, there is a lack of commonality between the references, compounded with a lack of teaching or suggestion to combine, as required by the MPEP and case law.

Therefore, claims 6 and 7 should be allowable over Technology Strategy, Inc. in view of Lee et al.

Claims 5, 9, 11, 13 and 15

Claims 5, 9, 11, 13 and 15 include the limitations are rejected on the same basis as claims 4, 8, 10, 12 and 14, respectively. The Examiner's rejections of those claims are traversed above and restated by reference.

Therefore, claims 5, 9, 11, 13 and 15 should be allowable over Technology Strategy, Inc. in view of Lee et al.

Claims 17-18, 20-22, 24, 26, 30, 31-32, 36 and 37-38

Claims 17-18, 20-22, 24, 26, 30, 31-32, 36 and 37-38 are rejected on the same basis as claims 2-3, 5-7, 9, 11, 12, 28-29, 33 and 29-29, respectively. The Examiner's rejections of those claims are traversed above and restated by reference.

Therefore, claims 17-18, 20-22, 24, 26, 30, 31-32, 36 and 37-38 should be allowable over Technology Strategy, Inc. in view of Lee et al.

Applicants respectfully submit that claims 2-3, 5-7, 9, 11, 13, 15, 17-18, 20-22, 24, 26, 30-32 and 36-38 should be allowable over Technology Strategy, Inc. in view of Lee et al.

Rejection Under 35 U.S.C. § 103(a) of Claims 41-42

The Examiner rejects **claims 41-42** under 35 U.S.C. § 103(a) as unpatentable over Technology Strategy, Inc. screenshots from archive.org attributed to www.grossprofit.com (References A), reprint on web site attributed to Stores Magazine, "Merchants Try Complex Math Tools to Improve Inventory Decisions" (Reference B), and reprint on web site attributed to The Boston Globe, "Looking Back to Fashion's Future."

We begin by restating the legal principles applicable to the uncommonly used single reference obviousness rejection. For a single reference Section 103 rejection, the Examiner needs to provide evidence of a teaching or suggestion to extend the reference to include the claimed features that admittedly are not part of the reference. It is fundamental, as indicated in MPEP Section 2143.01, that the Examiner rely on some evidentiary quality suggestion to modify Huang:

> Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also >*In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references);< *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The latest update to this section of the MPEP cites *In re Lee*, in which the Federal Circuit clarified the need for evidentiary quality support of an Examiner's factual basis for finding a teaching, suggestion or motivation in the prior art (as opposed to the Examiner's opinion), 277 F.3d at 1343-44:

> As applied to the determination of patentability *vel non* when the issue is obviousness, "it is fundamental that rejections under 35 U.S.C. § 103 must be based on evidence comprehended by the language of that section." *In re Grasselli*, 713 F.2d 731, 739, 218 U.S.P.Q. (BNA) 769, 775 (Fed. Cir. 1983). ... "The factual inquiry whether to combine references must be thorough and searching." *Id.* It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. [citation omitted] The need for specificity pervades this authority. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2D (BNA) 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 U.S.P.Q.2D (BNA) 1453, 1459 (Fed. Cir. 1998) ("even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious."); *In re Fritch*, 972 F.2d 1260, 1265, 23U.S.P.Q.2D (BNA) 1780, 1783 (Fed. Cir. 1992) (the examiner can satisfy the burden of showing obviousness of the combination "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references"). ... In its decision on Lee's patent application, the Board rejected the need for "any specific hint or suggestion in a particular reference" to support the combination of the Nortrup and Thunderchopper references. Omission of a relevant factor required by precedent is both legal error and arbitrary agency action.

The outcome of cases decided even before *In re Lee* makes it clear that real evidence is required to support an asserted teaching, suggestion or motivation to modify a single reference for obviousness. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1369-70 (Fed. Cir. 2000) (rev'd finding of obviousness, as "Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference."); *Kolmes v. World Fibers Corp.*, 107 F.3d 1534, 1541 (Fed. Cir. 1997) (aff'd patent not invalid, as no suggestion to modify the '989 patent with regard to non-metallic fibers).

Claim 41

Claim 41 includes the limitations:

wherein the actual sales interval includes daily or more frequent periods and evaluating takes place on a daily or more frequent period basis

These limitations are not found in Technology Strategy, Inc.

The best that the Examiner has to rely on is the passage from reference A, page 4, which reads, "during the season, the model is used to analyze actual weekly sales and inventory data to determine for each category of merchandise markdown and allocation decisions that will result in maximum gross margin dollars." This does not disclose rescaling cloned historical sales; it says to devise a markdown strategy. So the premise that TSI teaches weekly rescaling is mistaken.

Without evidence or technical reasoning, the Examiner asserts that it would be obvious to one of skill in the art to do something daily instead of weekly "in order to more accurately control inventory volumes by using a smaller unit of measurement." This is contrary to human nature and experience; Applicants respectfully require an affidavit or declaration from the Examiner as evidence of the asserted obviousness. In common experience, many things are done weekly, such as girls' Saturday soccer games or Wednesday practices for a recreational team. It would not be obvious or practical to schedule daily games or even daily practices for a recreational team. The Federal Circuit's standard *In re Lee*, applies to the Examiner's obligation to produce evidence and reasoning. The MPEP, Section 2144.03, provides guidance as to what more the Examiner must provide:

> If the applicant traverses such an assertion the examiner should cite a reference in support of his or her position.
>
> When a rejection is based on facts within the personal knowledge of the examiner, the data should be stated as specifically as possible, and the facts must be supported, when called for by the applicant, by an affidavit from the examiner. Such an affidavit is subject to contradiction or explanation by the affidavits of the applicant and other persons. See 37 CFR 1.104(d)(2).

In the absence of a proper affidavit and for failure of the premise about weekly rescaling by TSI, claim 41 should be allowable over Technology Strategy, Inc.

Claim 42

Claim 42 includes the limitations:

> *wherein comparing and evaluating take place after the actual sales interval, without intervention of a user*

These limitations admittedly are not found in Technology Strategy, Inc. The Examiner slides back into relying on Lee et al., as in rejecting claims 2-3. The traversal of those rejections is restated here by reference.

Therefore, claim 42 should be allowable over Technology Strategy, Inc.

Applicants respectfully submit that claims 41-42 should be allowable over Technology Strategy, Inc. (and in view of Lee et al.)

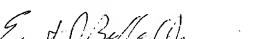
CONCLUSION

Applicants respectfully submit that the pending claims are now in condition for allowance and thereby solicit acceptance of the claims, in light of these amendments.

Applicants are in the process of arranging an interview to address this and other related applications pending before the Examiner.

The undersigned can ordinarily be reached at his office at (650) 712-0340 from 8:30 to 5:30 PST, Monday through Friday, and can be reached at his cell phone (415) 902-6112 most other times.

Respectfully submitted,



Dated: 26 May 2005

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